

surrounded only by tall grass with no trees or even large bushes in the vicinity.

On September 6th the two of us, while motoring past, stopped to watch the birds around an arm of the lake, which extends to the roadside. Among other birds we observed, perched on overhanging brambles on the steep earth bank above the water, groups of 2 or 3 Pied Kingfishers (*Ceryle rudis*), a solitary Common Kingfisher (*Alcedo atthis*), and two Whitebreasted Kingfishers (*Halcyon smyrnensis*) all within a distance of fifty yards from each other—a concentration of kingfishers such as I have never seen before.

We had just noticed a flock of about eight Whitethroated Munias (*Lonchura malabarica*) feeding on grass seed growing on top of this earth bank, when suddenly one of the Whitebreasted Kingfishers darted from its perch and seized a munia in its powerful bill. It flew off towards the main body of the lake with the munia protesting loudly and struggling violently. The kingfisher kept on flying till, suddenly, a shower of feathers erupted from its beak and the munia, apparently minus its tail, made good its escape. By this time, the kingfisher was at a considerable distance, but through the binoculars it appeared still to have a bill-full of feathers, almost as bulky as munia itself.

KHANEWAL,  
WEST PAKISTAN,  
December, 1964.

T. J. ROBERTS  
C. PRIDDY

[A case of a Whitebreasted Kingfisher catching and eating a smaller bird (probably a White-eye) was reported by S. N. Sen (1944, *J. Bombay nat. Hist. Soc.* 44 : 475.—Eds.)]

#### 8. NOTES ON INDIAN BIRDS 3—THE ALPINE SWIFT, *APUS MELBA* (LINNAEUS), WITH A DESCRIPTION OF ONE NEW RACE

(With a text-figure)

The paucity of specimens available has prevented an appraisal of the races of the Alpine Swift (*Apus melba*) in India. Stuart Baker in the FAUNA (1927) accepted the nominate race, described by Linnaeus in 1758 from Gibraltar, and mentioned the range thus: 'The mountains of Northern Africa and of Southern Europe as far north as the Alps; South-West Asia to practically the whole of India and Ceylon. It is found as far east as Assam and is common during the winter in Cachar and Sylhet.' He drew attention to the fact that birds from south

India were smaller and darker with the wing 190-195 mm., never exceeding 200 mm.

In 1928, on these differences, Hartert separated the Ceylon birds as *bakeri* and Stuart Baker referred to this in the FAUNA 8, p. 680, indicating the differences as identical with those mentioned by him earlier and gave the range as 'mountains and hills of Ceylon and Southern India'.

In 1954, Koelz described *nubifuga* from Rathi, Kumaon, the type being a ♀ with a 205 mm. wing, and included birds from Mysore with wings 202.5 to 206 as of this race.

Ripley in the SYNOPSIS has accepted three races from India and Ceylon:

- (a) *melba* (Linn.): Wintering in West Pakistan and north-western India;
- (b) *nubifuga* Koelz: All India south to Kerala, east to Assam and East Pakistan; breeding in the Himalayas and in Mysore;
- (c) *bakeri* Hartert: Ceylon.

In November 1944, I collected one out of a large flock of swifts that swooped down to drink at the Patalganga River, Kolaba District, on the mainland opposite Bombay, and its large 226 mm. wing aroused my interest and led me to examine these birds more carefully. I have subsequently been able to obtain some more specimens from the neighbouring areas and, as these together with the other material available do not tally with Ripley's account in the SYNOPSIS, I attempt a reassessment.

The range of measurements in the two sexes is almost identical and, in view of the relatively small number of specimens available for examination, I am referring to both sexes together. There appears to be no difference in the plumages in the different seasons. The material available falls into the following subspecies:

1. *bakeri* Hartert Only 2 specimens are available from Ceylon. These are darker than 9 skins from south India [Jog (Gersoppa) and other places in North Kanara (7), Palnis (1), and Coimbatore (1)], but can be matched in colour with the two from Yewat, Poona (Maharashtra), referred to in item 2 below. In the two Ceylon specimens the brown edges to the white of the chin appear wider at the level of the gape, making the white narrower.

Dr. Charles Vaurie to whom I sent a draft of this note informs me that, allowing for the north to south cline in size, the birds from Ceylon are darker as well as smaller. He measured the wings of 5 males from Ceylon 194-207 (199.5). These measurements agree with those of south Indian birds (see Table), which are different from *nubifuga* (type locality Kumaon, U.P.) and the birds should either be included with *bakeri* or described as a separate race. In the absence of sufficient material, I am

MEASUREMENTS OF *Apus melba* (Linnaeus)

Particulars of specimens	No. of specimens	Wing	Tail	Breast band
<i>A. m. bakeri</i> (a) from Ceylon .. (b) from S. India ..	2 9	199-204 av. 201.5 196-207 av. 201.2	69-70 av. 69.5 68-76 av. 73.3	28-30 av. 29 16-31 av. 25.5
Specimens from Bombay Deccan ..	6	194-207 av. 201	65-75 av. 71.5	31-42 av. 36
<i>A. m. nubifuga</i> from northern hills (Simla &c.) ..	7	212-217 av. 214	71-85 av. 76	17-37 av. 25
<i>A. m. tuneti</i> ..	7	213-222 av. 216.6	75-89 av. 79	11-29 av. 26
Specimen collected in Kolaba District in Nov. 1944 ..	1	226	81	damaged
Specimens from Saurashtra and Mount Abu ..	4	212-218 av. 215.25	70-76 av. 72.5	32-38 av. 35.5

for the moment following Stuart Baker and leaving them as *bakeri*. The Ceylon birds are said to be subject to considerable erratic local movements, and the Gersoppa birds were not seen in June and August by McCann and myself, though McCann noted them in the Palnis in June and July. A pair shot during Christmas week were in breeding condition (Abdulali 1936, *J. Bombay nat. Hist. Soc.* 38 : 829).

Meinertzhagen (Birds of East and Tropical Africa. *Ibis* 1922 : 34-35) saw large breeding colonies on the eastern escarpment of the Nilgiri Hills, but failed to obtain specimens. Daily movements of large numbers far from suitable breeding places have been recorded.

2. I have six specimens from India from the area which may be termed the Bombay Deccan [Yewat, near Poona (2), Tungar Hill, Thana, Bombay (1), Ghoti, Nasik (2), and Chikalda, Berar (1)], which are similar to birds from further south, but in which the breast band is noticeably broader.

The two birds from Yewat, a male and female shot out of several parties hawking over the plains in twos and threes, are as dark as those from Ceylon, but of course with broader breast bands.

The wider breast band separates them from birds both from the south and the north; in the latter the breast band is narrower than the figures suggest. In series they are darker than *nubifuga* and also appreciably smaller (see Table).

Lt. H. E. Barnes (1886, *J. Bombay nat. Hist. Soc.* 3:47) refers to 'Mr. Davidson of Malligaum (? Malegaon, c. 55 miles NE. of Nasik—H.A.)' showing him both nests and nestlings of the Alpine Swift obtained by him from fissures in rocks in the mountains in 'that district'. He adds that the nests showed signs of having been attached to the rock on two sides and were of very solid structure in comparison with those of the Common Indian Swift. Later, in April 1887 Davidson took a half-feathered chick at Saptashring, near Nasik, (Whistler, *J. Bombay nat. Hist. Soc.* 28 : 30); the species is therefore resident in this area.

In view of these differences, I would restrict *nubifuga* to its Himalayan limits and hereby name the birds from the hills and ghats near Bombay

*Apus melba dorabtatai* subsp. nov.

The name is a small token of my appreciation of the generous aid so often given by the Sir Dorabji Tata Trust, Bombay, to the Bombay Natural History Society and to many individuals engaged in scientific research.

*Holotype* : ♂ in the Bombay Natural History Society's collection bearing Register No. 20027, collected by me at Ghoti, Nasik District, Maharashtra State, on 13 February 1955,

*Paratypes* : 1 ♂ No. 19725, 4 ♀♀ Nos. 11560, 19305, 19306, 19726 in the Society's collection.

3. *nubifuga* Koelz 1954, Contrib. Inst. Regional Exploration No. 1 : 25. The original description reads :

‘Type ♀ Rathj, Kumaon, June 9, 1948, Thakur Rup Chand collector, W. 205.

‘Compared with the type of *A. m. bakeri* (Ceylon ; A.M.N.H.), paler above, less black in body plumage and with a broader breast band. The race *bakeri* is described as nearly as dark as *A. m. africana* ; this is confirmed by a study of specimens in American Museum of Natural History.

‘Compared with a long series of *A. m. tuneti* from Tunis (A.M.N.H.) and Afghanistan, darker, with broader breast band and smaller white throat patch.

‘Hardly distinguishable in colour from the nominate race *melba* (Gibraltar ; A.M.N.H.) but averages a bit darker, the breast band wider and throat patch smaller. The wing is smaller.’

The wing of the type specimen appeared to me too small for a northern bird and Mr. R. W. Storer of the Museum of Zoology, University of Michigan, kindly examined the type. He measured the right wing as 207 mm., and said that he ‘could not be certain that there was any remnant of a sheath at the bases of the primaries’. The left wing measured about the same, but ‘the tips of the outer two primaries are damaged. The outer primary is not larger than the next and, judging from our only other skin of the species (an example of *tuneti* from Afghanistan), the outer primaries lack 3 to 5 mm. of their full growth’. He added that the label bore the remark ‘Belly patch’, by Koelz, presumably meaning incubation patch, and another in pencil in van Tyne's handwriting : ‘Very much like *bakeri* in colour and size’. It appears that the wing measurements of *nubifuga* in the original description are not very representative.

The measurements of 7 skins from the northern hills [Simla (4), Chanoli, Garhwal (1), Ghaggar, Ambala (1), and Chitral (1)] are indicated in the Table. The ♂ from Chanoli, Garhwal, dated 12 May 1899 had enlarged testes, while the Simla specimens include 3 immature birds obtained in August and September, which together with the incubation patch on the type specimen indicates a breeding season from about May to August. There is however considerable local movement. Jones, for instance (*J. Bombay nat. Hist. Soc.* 26 : 614), refers to seeing large scattered flocks in spring and autumn and says that it departs from Simla at the end of April and returns in October. Whistler (*J. Bombay nat. Hist. Soc.* 32 : 727) noted them on various dates from 11 April to 17 May, and said they were more numerous on autumn migration, 21 August to 24 September, often in very large numbers.

The British Museum have lent me for examination a skin obtained by Davidson at Simla on 23 August 1877, which is paler than the other specimens and has an attenuated tip to the outer tail feathers as in *tuneti* (q. v.) and may well be of that race. Even if *nubifuga* is restricted to the northern hills, the paucity of specimens and other information over this wide range is very obvious and requires a much more careful examination.

4. *tuneti* Tschusi Meinertzhagen (loc. cit.) wrote: 'I have recently collected a series of 10 from Palestine and Crete. They are all paler and greyer in colour than those breeding elsewhere in Europe and the Himalayas . . . . . agree with breeding birds from North Africa, *tuneti* from Tunis.' He questions the identity of *melba* Linn., named 'after a figure by Edwards of a bird from Gibraltar', and says: 'The colour is particularly dark, even darker than most birds from Southern Europe, and *melba* would apply to South European birds. If *tuneti* is separable, it would apply to birds breeding in Northern Africa, Somaliland, Arabia, Crete, Palestine, east to Persia, but not to Baluchistan and the Himalayas . . . .'. Unfortunately he does not indicate what race inhabits the last area!

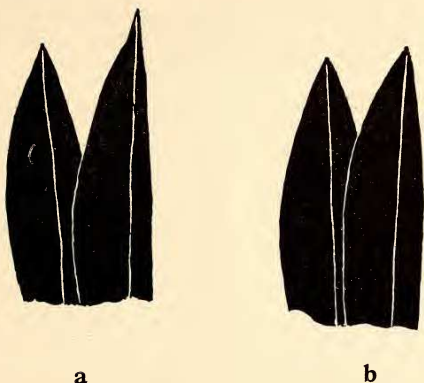
This race has not been recorded from India, but the bird shot out of a large flock was obviously a migrant and its size compares well with 6 specimens from northern Shiraz (1), Murghat Herat, Afghanistan (1), Palestine (3), NW. Himalayas (1), and the Simla specimen referred to above, which all appear to be *tuneti* (see Table). The specimen was sent to Dr. Mauersberger at the Zoological Museum at Berlin, and he stated that it matched their series of *tuneti*, and was distinctly paler and greyer than most *melba*. There is some variation in the colour of the upper parts, but the Bombay bird is paler than any specimen of *nubifuga*, *dorab-tatai* or *bakeri*. In all the eight specimens, the outermost tail feathers appear to taper to a sharper point than in the others, and this character is illustrated in the accompanying sketch. It has been suggested that this is a character which may be dependent upon the age of the individual, but it is not visible in any of the other skins examined.

5. Four birds [Hingolghadh, Saurashtra (3), and Mt. Abu (1)] all taken in September can be picked out from all Indian specimens by the upper parts being grey rather than brown. Sálím Ali has identified them as *melba* and these are probably the specimens of the nominate race from Saurashtra and Mt. Abu in the Bombay Natural History Society collection mentioned in the SYNOPSIS.

One skin was sent to Dr. Mauersberger who found it 'paler than *melba* and about matching *tuneti*'. In series I find them quite different from those which I have identified as *tuneti*.



Sálim Ali obtained a male at Gujri in Dhar State on 4 September 1939 with a 214 mm. wing which Whistler (*J. Bombay nat. Hist. Soc.* 41: 474) identified as *melba*, though he noted that the wing was a little



Outer tail feathers of:  
(a) *Apus melba tuneti*; (b) *A. m. bakeri*

small for the typical race. He said it agreed with his series from north-west India, being too pale for *bakeri*. Perhaps this was similar to the birds described here.

The fact that the four skins available from a restricted area are noticeably different from the four races referred to above prompts me to believe that they represent an undescribed race. Butler (*Stray Feathers* 3:453) said the Alpine Swift 'arrives at Mount Aboo in large numbers about the beginning of September and remains during part of the cold weather'. In the absence of any evidence regarding their breeding in the area and their subsequent movements, I am not separating them at this stage. I trust that further evidence will soon be available and permit a clarification.

I realize that this note is not exhaustive and I hope that those who have the opportunity will obtain more specimens, preferably of breeding birds, to try and clarify matters. With their wonderful powers of flight the swifts probably cover vast distances, but a fairly specialized type of nesting site is necessary. Many such sites may hold distinct populations and it is not improbable that it may be possible to associate the differences, now visible and accepted as individual variations in the same race, with different breeding populations.

I am grateful to the authorities of the Zoological Survey of India, the British Museum, the Colombo Museum, and the Tel-Aviv University for

the loan of skins for examination, to Dr. Charles Vaurie of the American Museum of Natural History for his comments on a preliminary note, to Dr. R. W. Storer of the Museum of Zoology, University of Michigan, for notes on the type specimen of *A. m. nubifuga*, to Dr. Sálím Ali for access to several references, and particularly to Dr. G. Mauersberger of the Zoological Museum of the University of Berlin for his comments on the specimens sent to him.

75, ABDUL REHMAN STREET,  
BOMBAY 3,  
October 17, 1964.

HUMAYUN ABDULALI

### 9. SWALLOWS *HIRUNDO RUSTICA* LINNAEUS ROOSTING ON WIRES

(With a plate)

I have seen swallows roosting in enormous numbers in reed beds (*Phragmites karka* Trin.) in Kerala and near Calcutta, and in sugarcane fields in Rajasthan and Kerala. Sálím Ali (1962)<sup>1</sup> has reported them as roosting in mangroves at Bombay. I recently noted swallows *Hirundo rustica* roosting on electric power lines near Dharavi, Bombay. Swallows collecting in large numbers on electric as well as telephone wires during the day is a common sight but, so far as I am aware, they have not been reported as roosting at night on such exposed perches. The roost was first noticed on 12 December 1963, and was in use as such till 20 January 1964, when I left Bombay for a couple of months. It was found abandoned on my return to the site on 5 April 1964. The roost was already occupied on 30 August 1964, when I visited the place again, and continues to be still in use. The roosting behaviour of these birds is under observation and will be reported later.

The photographs accompanying the note were taken on 2 November 1964 at 9.45 p.m.

BOMBAY NATURAL HISTORY SOCIETY,  
91, WALKESHWAR ROAD,  
BOMBAY 6-WB..  
February 2, 1965.

P. V. GEORGE,  
Research Scholar

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<sup>1</sup> Sálím Ali (1962): The BNHS/WHO Bird Migration Study Project—2. *J. Bombay nat. Hist. Soc.* 59 (3): 921-929.